



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

MAR 29 2013

CERTIFIED MAIL 7012 1010 0001 8097 4076
RETURN RECEIPT REQUESTED

City of Greenville
Attn: Mr. Brad Jones
Director of Public Works
340 Main Street
Greenville, Mississippi 38701

Re: U.S. Environmental Protection Agency and Mississippi Department of
Environmental Quality Compliance Evaluation Inspection
Information Request and Notice of Opportunity to Show Cause
National Pollutant Discharge Elimination System Permit No. MS0020184
Greenville Wastewater Treatment Plant and Wastewater Collection System

Dear Mr. Jones:

The U.S. Environmental Protection Agency, Region 4 and the Mississippi Department of Environmental Quality (MDEQ) conducted a Compliance Evaluation Inspection (CEI) of the City of Greenville, Mississippi's (Greenville) Wastewater Collection and Transmission System (WCTS). The objective of this CEI was to assess Greenville's compliance with the Clean Water Act (CWA) and Greenville's National Pollutant Discharge Elimination System (NPDES) permit. Additionally, the EPA evaluated Greenville's Management, Operations and Maintenance Programs related to its WCTS. The inspection results are summarized in the enclosed CEI report.

During the CEI, Greenville provided the EPA with a copy of its water and sewer customer complaint database. The EPA has several questions regarding the database, which are outlined below.

- (1) Under the "Problem Description" column of Greenville's customer complaint database, what do the following terms mean: (a) sewer (or main) up; (b) sewer (or main) down; (c) CORRECTED (Does this imply an issue on the City's side of the sewer?); (d) Station (or Lift Station) up; (e) s/b/u (EPA assumes sewer backup); (f) c/o (EPA assumes clean out); (g) service line (Is this City owned lateral or privately owned lateral)?
- (2) Under "Category Name" column of Greenville's customer complaint database, what are the codes for sewer complaints (e.g. 670)?
- (3) Under "Category Name" column of Greenville's customer complaint database, what are the other codes that water/sewer may use (e.g. 560, 650, 660, etc.) and what does each code mean?
- (4) Under "Category Name" column of Greenville's customer complaint database, what does "delivered" mean?
- (5) Does Greenville input in the "Category Name" code immediately or after a crew responds to determine the category?

- (6) If Greenville inputs the "Category Name" code immediately, does anyone go back to QA/QC the codes after the City responds (e.g. what if customer complains about drinking water leaking, but it's found to be a sewer leak upon response)?
- (7) What do "Date Promised" and "Date Delivered" mean in Greenville's customer complaint database?

Pursuant to Section 308 of the CWA, 33 U.S.C. § 1318, the EPA hereby requests Greenville to provide the information set forth in the questions above. Greenville is required to respond to this information request, as well as the enclosed CEI report, within 30 days of its receipt of this letter. The response should be directed to:

Mr. Brad Ammons, Enforcement Officer
U.S. Environmental Protection Agency, Region 4
Clean Water Enforcement Branch
61 Forsyth Street, S.W.
Atlanta, Georgia 30303-8960

Greenville's response to this information request should specifically reference the particular question number of the request and should be organized for the purpose of clarity. In addition, all information submitted must be accompanied by the following certification signed by a responsible City official in accordance with 40 C.F.R. § 122.22:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Failure to comply with this information request may result in enforcement proceedings under Section 309 of the CWA, 33 U.S.C. § 1319, which could result in the judicial imposition of civil or criminal penalties or the administrative imposition of civil penalties. In addition, there is potential criminal liability for the falsification of any response to the requested information.

Greenville shall preserve, until further notice, all records (either written or electronic), which exist at the time of receipt of this letter that relate to any of the matters set forth in this letter. The term "records" shall be interpreted in the broadest sense to include information of every sort. The response to this information request shall include assurance that these record protection provisions were put in place, as required. No such records shall be disposed of until written authorization is received from the Chief of the Clean Water Enforcement Branch at the U.S. EPA, Region 4.

If you believe that any of the requested information constitutes confidential business information, you may assert a confidentiality claim with respect to such information except for effluent data. Further details, including how to make a business confidentiality claim, are found in Enclosure B.

Upon review of information submitted by Greenville, pursuant to Greenville's response to the EPA's October 23, 2012, information request letter, as well as information given to the EPA during the January 29, 2013, CEI, the following violations have been identified:

1. Greenville has allowed at least 16 SSOs to occur from February 2007 through July 2012, totaling at least 40,027,750 gallons of untreated sewage that either directly or indirectly affected waters of the U.S. in violation of the CWA and/or in violation of Conditions T-28 (Proper Operation, Maintenance and Replacement) and T-29 (Duty to Mitigate) of Greenville's NPDES permit, issued to Greenville by MDEQ, with an effective date of August 29, 2011.
2. Greenville has failed to report at least 1 SSO to MDEQ in violation of Condition S-4 (Noncompliance Notification – Twenty-Four Hour Reporting). This SSO occurred at the South Theobald pump station and had not been reported to MDEQ as of the date of this CEI.
3. Greenville has experienced numerous sewage building backups according to the electronic customer complaint database provided to EPA during this CEI. Building backups that are caused by flow conditions in the City-owned portion of the WCTS are SSOs and can be indicative of violations of Conditions T-28 (Proper Operation, Maintenance and Replacement) and T-29 (Duty to Mitigate) of Greenville's NPDES permit, issued to Greenville by MDEQ, with an effective date of August 29, 2011.
4. The effluent limit exceedances listed below are a violation of Greenville's NPDES permit.
 - Fecal Coliform (Colonies/100 mL; Monthly Average) – July and August 2012
 - Total Suspended Solids (mg/L; Weekly Average) – November 2011.

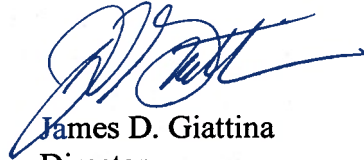
Such violations are subject to enforcement action pursuant to Section 309 of the CWA. This Section provides for the issuance of compliance orders, administrative actions to assess penalties and/or the initiation of civil or criminal actions.

To resolve the identified violations and discuss the EPA's possible enforcement actions, including the assessment of appropriate civil penalties, we request that representatives of Greenville contact Mr. Brad Ammons at (404) 562-9769 or via email at ammons.brad@epa.gov, within five business days of Greenville's submittal of the required information requested above to make arrangements for a conference.

In lieu of appearing in the EPA's offices for this meeting, a telephone conference may be scheduled. Greenville's representatives should be prepared to provide all relevant information with documentation, pertaining to the above violations including, but not limited to, any financial information, which may reflect Greenville's ability to pay a penalty. You have the right to be represented by legal counsel. Failure to appear may result in an immediate enforcement action against you or your facilities. The EPA may consider information provided during the meeting or telephone conference in any enforcement proceeding related to this matter.

If you should have any questions regarding this matter, please contact Mr. Brad Ammons.

Sincerely,



James D. Giattina
Director
Water Protection Division

Enclosures

cc: Mr. Chris Sanders
Mississippi Department of Environmental Quality

Mr. Jamon Rucker
Mississippi Department of Environmental Quality

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

**Region 4
Water Protection Division
Clean Water Enforcement Branch**



COMPLIANCE EVALUATION INSPECTION REPORT

City of Greenville, Mississippi
Greenville, Mississippi
NPDES Permit No. MS0020184

Facility Address:
Highland Plantation Road
Greenville, Mississippi 38127

Inspection Date:
January 29, 2013

Inspectors:
Brad Ammons, Environmental Engineer, EPA Region 4
Dennis Sayre, Environmental Engineer, EPA Region 4
Jamon Rucker, Mississippi Department of Environmental Quality

Inspection Report Prepared by:
Brad Ammons
Dennis Sayre

March 19, 2013

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ABBREVIATIONS AND ACRONYMS

CCTV	Closed Circuit Television
CEI	Compliance Evaluation Inspection
CWA	Clean Water Act
EPA	United States Environmental Protection Agency
GIS	Geographic Information System
I/I	Infiltration and Inflow
MDEQ	Mississippi Department of Environmental Quality
MOM	Management, Operation, and Maintenance
NPDES	National Pollutant Discharge Elimination System
SCADA	Supervisory Control and Data Acquisition
SORP	Sewer Overflow Response Plan
SSO	Sanitary Sewer Overflow
SUO	Sewer Use Ordinance
WCTS	Wastewater Collection and Transmission System
WWTP	Wastewater Treatment Plant

COMPLIANCE EVALUATION INSPECTION REPORT

The City of Greenville, Mississippi, Wastewater Collection & Transmission System, January 29, 2013

I. OVERVIEW

The City of Greenville, Mississippi (Greenville), through its Public Works Department, provides sanitary sewer services for residential, commercial and industrial entities within the City of Greenville, Mississippi. Regarding sanitary sewer services, Greenville is responsible for the operation and maintenance of one (1) Wastewater Treatment Plant (WWTP), approximately 200 miles of sewer lines, approximately 101 sanitary sewer pump stations, and other sanitary sewer related facilities.

The Mississippi Department of Environmental Quality (MDEQ) is authorized under the Clean Water Act (CWA) to implement the National Pollutant Discharge Elimination System (NPDES) program in Mississippi. Greenville is covered under NPDES Permit No. MS0020184. MDEQ has not issued any formal enforcement actions against Greenville related to any of its sewer related facilities.

On October 23, 2012, the Environmental Protection Agency (EPA) sent a CWA Section 308 information request letter to Greenville requesting information related to Sanitary Sewer Overflows (SSOs) from the wastewater collection and transmission system (WCTS). Greenville responded to EPA's CWA Section 308 information request letter on November 28, 2012.

EPA conducted a compliance evaluation inspection (CEI) of Greenville's WCTS on January 29, 2013. The purpose of this CEI was to evaluate compliance with the CWA as it relates to SSOs from the sewer system and any effluent limit violations at the WWTP. Additionally, the purpose of this compliance inspection was to examine the causes and potential corrective actions for SSOs from the sewer system.

During the January 29, 2013 CEI, EPA and MDEQ visited six (6) sewer pump stations and two (2) sewer line canal/drainage way crossings. Below are the specific facilities inspected during the January 29, 2013 CEI.

Pump Stations

- S. Theobald Pump Station
- Anne Stokes Pump Station
- Wildwood #1 Pump Station
- Wildwood #2 Pump Station
- Producers Mill Pump Station
- Tennessee Street Pump Station

Canal sewer crossings

- Reed Road south of Hwy 82
- Cypress Lane at Anne Stokes Road (ended up being a potable water line)

This report describes EPA's findings, and provides an initial analysis of SSOs from the sewer system. In this report, EPA also identifies areas that need to be addressed and presents preliminary recommendations.

COMPLIANCE EVALUATION INSPECTION REPORT

The City of Greenville, Mississippi, Wastewater Collection & Transmission System, January 29, 2013

II. OBJECTIVES

The specific objective of this WCTS CEI was to assess the sewer system and Greenville's compliance with the CWA and/or its NPDES permit. Additionally, EPA examined the causes of SSOs from Greenville's sewer system and pump stations.

III. INVESTIGATION METHODS

The investigation of Greenville included:

- A review of federal databases and the NPDES permit.
- Review of Greenville's November 28, 2012 response to EPA's CWA Section 308 Information Request Letter.
- Interviews with Greenville personnel.
- Review of Greenville's records/documents.
- Visual inspection of SSO locations in the sewer system and pump stations.

IV. REGULATORY SUMMARY

Greenville is covered by NPDES permit no. MS0020184, which authorizes the discharge of treated wastewater under certain conditions from its WWTP into the Mississippi River. Steele Bayou was listed in MDEQ's 2006 §303(d) list near Issaquena from Black Bayou to the Yazoo River for nutrients, organic enrichment (low dissolved oxygen), and sediment/siltation (NOTE: this section of Steele Bayou is downstream of Greenville). MDEQ has not issued any formal enforcement for SSOs or effluent limit violations of the NPDES permit.

V. INSPECTION SUMMARY AND FINDINGS

EPA conducted a CEI of Greenville's WCTS on January 29, 2013 to evaluate compliance with the CWA and/or provisions of Greenville's NPDES permit.

A. Analysis of SSOs

Discharges from municipal sanitary sewer systems to waters of the United States are prohibited, unless authorized by an NPDES permit. In addition, overflows from the sewer system that do not reach waters of the United States and sewage backups into buildings that are caused by flow conditions in the City's sanitary sewers are indicative of a failure to comply with the proper operation and maintenance and/or other provisions of the NPDES permit.

On November 28, 2012, Greenville submitted to EPA information related to SSOs that occurred from February 2007 through July 2012. EPA analyzed this information and assigned each discharge a cause based on the information provided by Greenville. Greenville uses seven (7) major categories to assign causes to each SSO. These

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The City of Greenville, Mississippi, Wastewater Collection & Transmission System, January 29, 2013

categories are: Mainline clogged; Hurricane; Pipe collapse; Sludge/debris buildup; Grease buildup; Pump failure; and Pump clogged.

According to Greenville personnel, Greenville identifies SSO events typically by customer complaints.

The average annual total SSO volume from the sewer system and pump stations reported by Greenville from February 2007 through July 2012 is unknown because 9 of the 13 SSOs from the WCTS reported by Greenville in its §308 information request response did not have a volume associated with those SSOs. During the same period, over 61% percent of the SSO occurrences were attributed to either grease or debris blockages in Greenville's sewer pipes.¹ The table below breaks down the causes of SSOs in the sewer system by occurrence.²

Cause	Percent
Mainline clogged	53.8%
Hurricane	7.7%
Pipe collapse	7.7%
Sludge/debris buildup	7.7%
Grease	7.7%
Pump failure	7.7%
Pump clogged	7.7%

Greenville reported that it had no locations with chronic or recurring SSOs and/or constructed overflow structures. In addition, Greenville has no written Management, Operations and Maintenance (MOM) Programs.

Finding: Greenville has not reported all of its SSOs to MDEQ and at least in one case, had a major spill that was not reported for weeks and had not been reported as of the date of this CEI. Greenville employees told EPA and MDEQ that they experienced a large SSO at the South Theobald pump station a few weeks prior to this CEI. *See enclosed photos for evidence of this very large SSO at the South Theobald pump station.*

Recommendation: Greenville should develop a written Sewer Overflow Response Plan (SORP) to ensure that Greenville has proper SSO notification, reporting and recordkeeping procedures.

¹ Greenville provided EPA with a copy of its customer complaint database during the January 29, 2013 CEI. In reviewing this database, it appears that Greenville has experienced a lot more SSOs than were reported in Greenville's §308 information request response.

² As EPA reviews Greenville's database, it is likely that these percentages will significantly change. Percentages based upon Greenville's reported SSOs in its §308 information request response and do not include 3 violations reported as SSOs at the WWTP.

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The City of Greenville, Mississippi, Wastewater Collection & Transmission System, January 29, 2013

Finding: Mainline clogging and sludge/debris/grease are the two leading causes of SSO occurrences reported by Greenville in its response to EPA's information request letter.

Recommendations: Greenville should develop and implement a Gravity Line Operations & Preventative Maintenance Program for routine cleaning of the entire WCTS, as well as a Fats, Oils and Grease (FOG) Control Program to prevent the entry of FOG into the WCTS. However, many municipal utilities attribute SSOs to grease, when the true cause of the blockage is different. For example, grease may not block a sewer unless there are roots, offset joints and/or other sewer defects that cause the grease to accumulate. Therefore, Greenville should have a standard procedure for investigating the underlying causes of the SSOs more thoroughly, develop and implement a Sanitary Sewer Evaluation System (SSES) and Rehabilitation Program, and institute a system-wide preventative cleaning program. As at least one of the reported SSOs was attributed to sludge/debris in the wet well of a pump station, Greenville should also develop a Pump Station Operations and Preventative Maintenance Program to ensure proper O&M of the pump stations that Greenville owns and operates.

Finding: Greenville only has 2 of its 101 sewer pump stations on Supervisory Control and Data Acquisition (SCADA) and none of the pump stations visited had on-site alarms or backup power. In addition, Greenville employees stated that there are several pump stations in their WCTS that are too large for the largest portable generator the City owns.

Recommendations: Greenville should consider installing SCADA systems on the Pump Stations it owns and operates. Greenville should install on-site alarms (visual and/or audible) at the pump stations it owns and operates. Finally, Greenville should either install on-site generators and/or purchase portable generator(s) that are large enough to power the City's largest pump stations.

B. Capacity, Management, Operation, and Maintenance Programs

EPA assessed several of Greenville's CMOM programs through this inspection. The following sections will discuss and provide recommendations for several MOM programs.

1. Continuous Sewer System Assessment Program

a. Prioritization

This was not specifically discussed during the inspection. However, it appears that the City does not prioritize sewer areas for inspection/assessment.

Recommendations: Greenville should develop and implement a sewer WCTS prioritization program to drive its sewer inspection/assessment activities.

b. Corrosion Defect Identification

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The City of Greenville, Mississippi, Wastewater Collection & Transmission System, January 29, 2013

Greenville has experienced several sewer line breaks in the past. In fact, Greenville's largest reported SSO of 3 million gallons was due to a 30" force main break along the Mississippi River. While that SSO was not directly attributed to corrosion, EPA noted signs of corrosion in other parts of the WCTS during this CEI. *See attached photos for evidence.*

Recommendations: Greenville should identify any major sewer line that may be subject to corrosion. Therefore, Greenville should develop a program that includes procedures for corrosion identification, corrosion identification forms, performance goals, corrosion defect analysis, and a mechanism to collect this data.

c. Manhole Inspection

While this was not discussed specifically, Greenville does not appear to have a WCTS-wide system of inspecting manholes.

Recommendations: Greenville should develop a program to routinely inspect manholes within the entire sewer system. The program should include standard manhole inspection procedures, inspection forms, performance goals, manhole defect analysis, and a mechanism for collecting this data.

d. Gravity Sewer Line Inspection

Greenville does not appear to have a WCTS-wide system of inspecting gravity sewer lines as Greenville employees told EPA and MDEQ that the only time gravity lines are CCTV'd is after a SSO occurs. In fact, Greenville has to hire a contractor to conduct CCTV inspections.

Recommendations: Greenville should develop and implement a program to routinely inspect gravity sewer lines as part of the recommended SSES and rehabilitation program. This program should use industry-standard methods of inspection (e.g. Closed-Circuit Television of gravity sewer lines, dyed water flooding, smoke testing, etc.). Finally, this inspection program should also inspect sewer laterals.

e. Flow Monitoring

Greenville does not have any flow meters in its WCTS. According to Greenville personnel, there are two locations in the WCTS that have wet weather capacity limitations: (1) the Smith interceptor and (2) the interceptor located near the intersection of Reed Road and South Colorado Street. In fact, EPA noted several locations of other capacity-limited sewers during this CEI. *See attached photos for evidence.*

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Recommendations: Greenville should develop a flow monitoring program to support engineering analyses related to sewer system capacity and peak flow evaluations. This program would help in understanding the causes of and finding possible locations of SSOs, and help in the development of a sewer model. The program may include the use of an appropriate number of calibrated permanent or temporary flow meters during specific sewer system assessment activities. The program should also include adequate rainfall measurement and mechanisms to collect the flow monitoring information.

f. Gravity System Defect Analysis

Greenville does not appear to have any Gravity System Defect Analysis program as employees told EPA that it does not inspect the sanitary sewers by CCTV unless a SSO has already occurred.

Recommendations: Greenville should develop and implement a program that analyzes gravity sewer system defects. This program should include industry standard defect codes (available from different sources), written defect identification procedures and guidelines, a standardized process for cataloging gravity system defects, and mechanisms to collect and save this data for further analysis. This data could be used to develop and/or support rating criteria used in the prioritization scheme.

g. Pump Station Performance and Adequacy

According to Greenville personnel, there are two crews that check pump stations. These crews drive by each pump station daily (Monday-Friday) and do a more detailed check on each station once a month.

According to the pump station check sheet that was provided to EPA and MDEQ, it appears that Greenville only records the date, # of working pumps, the wet well level and if electrical controls are working during its monthly pump station check. If pump run times are not recorded, there is no real way for Greenville to determine the adequacy of its pumps.

Recommendations: Greenville should develop and implement a program that evaluates pump station performance and adequacy. The program should include trend analysis of pump run-times, pump start counters, historical review of causes for pump failures or SSOs, and mechanisms to collect and analyze this data. Greenville should specifically consider installing SCADA systems on its pump stations. Greenville should use this data to evaluate if pump stations are adequate to handle flows, and identify performance problems.

2. Infrastructure Rehabilitation Program

In the last five years, Greenville has not completed any WCTS rehabilitation except

COMPLIANCE EVALUATION INSPECTION REPORT

The City of Greenville, Mississippi, Wastewater Collection & Transmission System, January 29, 2013

for that paid for by a 2010 State Revolving Fund (SRF) loan from MDEQ. This 2010 SRF loan was for the South Colorado Street (All Saints Circle) sewer project in the amount of \$479,465.

Recommendations: Greenville should conduct a system-wide SSES and Rehabilitation Program. Specifically, the SSES should evaluate all gravity sewer line defects, manhole defects, pump station defects, force main defects and siphon defects. Finally, a post-rehabilitation inspection program should be developed and implemented in order to review the effectiveness of the rehabilitation program.

3. System Capacity Assurance Program

- a. Capacity Assurance for New Connections, and
- b. Protocols for Capacity Assurance

Greenville does not have a formal, written WCTS capacity assurance program. As mentioned above, Greenville employees identified to the 2 following capacity limited areas in the City's WCTS:

- Smith interceptor
- Reed Road at South Colorado Street interceptor (18" pipe).

In addition, EPA noted several locations of capacity limited sewers/pump stations during this CEI. *Please see attached photos for evidence.*

Recommendations: Greenville should develop and implement a formal program to ensure that there is adequate capacity to collect, transmit, and treat additional sewage expected as a result of prospective new sewer connections. Greenville should develop standardized design flow rules of thumb (i.e., regarding pipe roughness, manhole head losses, accuracy of distance and slope on as-built drawings, and water use). Additionally, Greenville should use techniques to predict the impacts of additional flow (i.e., hydraulic model of sewer system) and flow metering to confirm mathematical estimations of existing peak flow. The program should also require the certification of adequate capacity by a registered Professional Engineer.

4. Sewer Mapping and System Inventory Program

Greenville has not placed the WCTS maps into a geographic information system (GIS). In fact, City employees could not locate an entire WCTS map and told EPA that the sewer map is on 3x5 index card sized paper.

Recommendations: Greenville should develop and implement a Sewer Mapping and System Inventory Program that will ensure that a sewer system inventory exists, is updated, and cataloged. Greenville has not placed its WCTS inventory into GIS, or

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The City of Greenville, Mississippi, Wastewater Collection & Transmission System, January 29, 2013

other holistic mapping program. Greenville should establish goals and schedules to enter this information into GIS or other mapping program by a certain date.

5. Information Management System

Greenville has a One Call complaint phone number as well as a water/sewer complaint phone number. If a complaint is received during normal work hours (i.e. 8am-5pm for the One Call number and 7am-4pm for the water/sewer number, Monday – Friday), the information is entered immediately into a database, a work order is created and a response crew is dispatched. If a complaint is received after hours, it is forwarded to the WWTP, the on-call crew is called for response and the complaint and resolution of the complaint is not entered into the database until the next business day. The City had started using a new complaint/work order database about 60 days prior to this inspection and an electronic copy of the old database was provided to EPA.

Recommendation: Greenville should use its new database to shift resources from a reactive maintenance approach to a preventative and eventually, a predictive maintenance approach. The database should be used to prioritize sewer inspection/assessment activities, as well.

6. Financial Analysis Program

- a. Operations & Maintenance Budget Program
- b. Capital Improvement Budget Program, and
- c. Customer Rate Setting Analysis Program

Greenville employees stated that they are budgeted a set amount of capital improvement money each year for the WCTS and must do as much rehabilitation as possible with that amount (\$120,000/year for outside contract repairs). According to Greenville employees, there are 590 sewer line repairs known and the City gets \$160,000 - \$170,000 per year to rehabilitate those defects. Greenville does any point repairs at 6 foot depth or less with City staff and equipment (any repairs deeper than 6' are contracted out). There is no plan to rehabilitate the entire WCTS and any capital improvements are generally spent under reactionary circumstances. The O&M budget and customer rate setting were not specifically discussed.

Recommendations: Greenville should develop and implement a program to analyze and recommend customer rates every year to secure sufficient funds to satisfy all the capital improvement and operation and maintenance financial needs.

7. Equipment, Tools & Inventory Management Program

This program was not specifically discussed during the inspection. However, Greenville has only two (2) portable generators (a 10kW and a 100 kW) and no

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The City of Greenville, Mississippi, Wastewater Collection & Transmission System, January 29, 2013

portable pumps. Greenville does not have enough or large enough portable generators and/or portable pumps available for the number and size of pump stations the City owns. In addition, Greenville owns two (2) combination jet/vacuum trucks, but only one is dedicated to water & sewer.

Recommendations: Greenville should develop and implement an Equipment, Tools and Inventory Management Program. Specifically, this program should address equipment, tools and other items (e.g. spare pipe or pump parts) needed to address SSOs due to power outages, pump failures (mechanical), and line breaks.

8. Customer Service Programs

a. Customer Complaints

As discussed above, Greenville has two customer complaint phone numbers for normal business hours and those phone numbers are routed to the WWTP for after-hours complaint calls.

Recommendation: Greenville should use the complaint database to inform the public of rehabilitation needs and prioritize WCTS assessment and rehabilitation work.

b. Public Education Program

Greenville's Fats, Oils and Grease (FOG) compliance/enforcement program is run by the City's Permits Division. No details were provided about the Permits Division's FOG public education program (e.g. residential grease management, food disposal practices, flyers, bill inserts, public event outreach, materials to encourage proper FOG disposal, etc.). EPA and Greenville did not specifically discuss public education related to other sewer issues (e.g. maintenance or rehabilitation needs requiring increased customer rates, problems caused by illegal sewer connections, etc.).

Recommendations: Greenville should develop and implement a written, formal public education program to educate the public about FOG management, food disposal, illegal connections, and the need for increased customer rates due to maintenance or rehabilitation work needed.

9. Legal Support Programs

a. Inter-Jurisdictional Agreement Program

Greenville has no publically owned satellite systems. Therefore, at this time, there is no need for a formal inter-jurisdictional agreement.

b. Ordinance Program

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EPA and Greenville did not discuss the City's Sewer Use Ordinance (SUO). However, EPA found the City's SUO online at the following website.

<http://www.municode.com/library/MS/Greenville>

Recommendation: Greenville should review, evaluate and revise its SUO for items such as FOG control, pretreatment requirements, and any sewer design criteria.

c. Pretreatment Legal Support Program

The State of Mississippi is the Control Authority for purposes of the pretreatment program. However, Greenville, if it has not already, should consider establishing local limits per EPA's *Local Limits Development Guidance* (EPA 833-R-04-002 A/B, July 2004) to protect its POTW system and notify MDEQ what the resulting local limits are.

d. Grease Control Legal Support Program

The City's online SUO outlines a limit of 100 mg/L for fats, wax, oil & grease (Part II, Chapter 7, Article III., Division 3, Section 7-144.(2) of Greenville's online ordinances), as well as the requirement of a grease trap/interceptor for certain sewer use customers (Part II, Chapter 7, Article III., Division 3, Section 7-146. of the online ordinances). According to Part II, Chapter 3, Article III, Division 1, Section 3-46. of the online version of Greenville's ordinances, the City has adopted the International Plumbing Code, 2003 edition, as its plumbing code. Finally, the SUO outlines penalties for violations of the SUO (Part II, Chapter 7, Article III., Division 3, Section 7-152).

e. Service Laterals Legal Support Program

EPA did not specifically ask about this Program in the §308 information request letter, and the only requirements on service laterals in Greenville's online SUO are for new construction/re-development (e.g. a new building using an old building's private lateral).

Recommendation: Greenville should address leaky or defective sewer service laterals and Greenville's authority in requiring remediation of defective private service laterals in its SUO.

f. Septic Tank Haulers Legal Support Program

EPA did not specifically ask about this Program in the §308 information request letter or during its inspection. EPA did not find any requirements for hauled waste

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(e.g. require a waste hauler permit; getting approval to dump wastes; outlining specific locations to dump wastes, etc.) in Greenville's online ordinances.

Recommendation: Greenville should address septic tank haulers and other wastes hauled for disposal in its sewer use ordinance.

g. "Call Before You Dig" Legal Support Program

EPA did not specifically ask about this Program in the §308 information request letter or during its inspection. According to Greenville's customer complaint database, there have been several SSOs attributed to contractors as well.

Recommendations: Greenville should review, evaluate and revise its "Call Before You Dig" Legal Support Program.

10. Water Quality Monitoring

a. Impact Monitoring Program

Greenville does not take or analyze water quality samples to assess impacts on waters of the United States after an SSO event.

Recommendations: Greenville should establish a specific threshold on when to assess the impact of pollution due to a specific SSO from the sewer system. This program should also include mechanisms to collect the data and transmit the information to the regulatory agency (MDEQ). Additionally, it should include established sampling parameters, standard sampling procedures, and quality assurance/quality control procedures.

11. Pump Station Operation Program

Greenville does not have a formal, written Pump Station Operation Program. According to Greenville staff, the pump station crews check the pump stations daily (Monday – Friday). However, given that Greenville does not have either a bypass pump (for mechanical problems) or a portable generator (for electrical problems) large enough to power its estimated 10-12 largest lift/pump stations, Greenville will not be able to react quickly enough in instances of mechanical or electrical failures to prevent SSOs, including unpermitted discharges.

Recommendations: Greenville should develop and implement a formal, written Pump Station Operation Program that includes equipment to react to either mechanical or electrical failures at its pump stations. The PSOP should address either purchasing of on-site electrical generators or portable generators large enough to power Greenville's largest pump stations. In addition, Greenville should investigate the purchase of bypass pump(s) large enough to pump flows expected at its largest pump stations in the case of mechanical failures.

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12. Corrosion Control Program

Greenville has experienced several sewer line breaks in the past, including but not limited to, a 10 million gallon SSO at the WWTP (Jan. 2010) and a 3 million gallon SSO when the 30" force main ruptured along South Theobald Street (May 2011). While neither SSO was directly attributed to corrosion by Greenville employees during this inspection, EPA believes this may be the beginning signs of further deterioration and/or corrosion of the City's WCTS. In addition, EPA noted signs of corrosion in other areas of Greenville's WCTS. *See attached photos for evidence.*

Recommendations: Greenville should establish a Corrosion Control Program that includes an inspection program for infrastructure that is or is suspected to be subject to corrosion problems. Additionally, this program should develop and implement site-specific corrosion control measures, a monitoring program to evaluate the corrosion control measures, and performance measures to assess how well the program is being implemented. This program should also incorporate standard communication procedures between the sewer operations staff and pretreatment control staff to initiate investigation and prevention steps where adverse effects on the system are occurring, or could occur, from industrial user discharges.

13. Fats, Oils, and Grease Control Program

Greenville does not have a formal, written Fats, Oils and Grease (FOG) Control Program. While Greenville has a numeric limitation of the discharge of FOG in its SUO, it appears to only apply to commercial or industrial sources of FOG. During the inspection, EPA observed large grease quantities in several pump station wet wells in residential areas, as well as in pump station wet wells that served commercial/industrial areas. *See attached photos for evidence.*

Recommendations: FOG can and has caused blockages in Greenville's WCTS. Additionally, FOG could increase operation and maintenance work due to increased blockages and sewer cleaning requirements. Greenville should review, update, revise and continue to implement its FOG Ordinance, as well as begin more public education and outreach about the true costs of dealing with FOG.

In addition, many municipal utilities attribute SSOs to grease, when the true cause of the blockage is different. For example, grease may not block a sewer unless there are roots, offset joints and/or other sewer defects that cause the grease to accumulate. Therefore, Greenville should investigate the underlying causes of the SSOs more thoroughly, develop and implement a Sanitary Sewer Evaluation System (SSES) and Rehabilitation Program and institute a system-wide preventative cleaning program.

14. Pump Station Preventative Maintenance Program

Greenville does not have a formal, written Pump Station Preventative Maintenance Program. While Greenville's sewer crews conduct a daily drive-by of all the pump

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stations (Monday – Friday), there is no preventative maintenance conducted on the pump stations. As the City does not own enough or large enough portable generators (for electrical issues) or bypass pumps (for mechanical issues), Greenville is only beginning to experience the costs of years of reactive maintenance of its numerous pump stations.

Recommendation: Given the number, age and size of the City's pump stations, Greenville must move from an informal, reactive maintenance program to a more formal, preventative maintenance program for its pump stations.

15. Force Main Preventative Maintenance Program

Greenville does not have a formal, written Force Main Preventative Maintenance Program. No mention of preventative maintenance was mentioned during the inspection.

Recommendation: Given the number, size, location and age of Greenville's force mains, Greenville must move from no force main preventative maintenance to a formal, written preventative maintenance program for its force mains.

16. Gravity Line Preventative Maintenance Program

- a. Routine Hydraulic Cleaning Program and
- b. Routine Mechanical Cleaning Program

Greenville does not have a formal, written Gravity Line Preventative Maintenance Program. The Public Works Department owns 2 combination jet/vacuum trucks: one is dedicated to Water and Sewer; the other is dedicated to the Streets Department. No mention was made of mechanical cleaning equipment. According to Greenville employees, approximately 90% of the water/sewer combination truck's work is response to trouble calls.

Recommendations: Greenville should develop and implement a formal, written Gravity Line Preventative Maintenance Program that accurately determines cleaning needs, establishes priorities, and schedules cleaning activities. This program should have adequate staff and necessary equipment. Additionally, this program should have written standard cleaning procedures, standard forms, performance measurements, and a mechanism to collect this data. Finally, this program should encompass the entire WCTS, while also addressing cleaning "hot spots."

c. Root Control Program

Greenville does not have in place a routine root control program and the response to root problems is a reactionary program rather than an ongoing maintenance

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program. According to Greenville employees, the City does have a root cutter and some liquid root killer, but they are not used preventatively.

Recommendations: Greenville should develop a root control program that accurately determines root control needs, establishes priorities, and schedules activities. This program should have adequate staff and the necessary equipment. Additionally, this program should have written standard root control procedures, standard forms, performance measurements, and a mechanism to collect this data.

17. Emergency Response Plan for Sewer System

Greenville does not have a formal, written Emergency Response Plan (ERP) for its Sewer System. Greenville has experienced several emergencies (e.g. Mississippi River flooding in 2011 or the rupture of the 30" sewer main near South Theobald Street in May 2011) where an ERP would be necessary.

Recommendations: Greenville should develop and implement a formal, written Sewer System Emergency Response Plan (a.k.a. Contingency Plan). Specifically, the ERP should address such items as Public Notification, Regulatory Agency Notification, an Emergency Flow Control Program, an Emergency O&M Plan, and finally, Preparedness Training.

C. Greenville WWTP

The Greenville WWTP operates under NPDES Permit No. MS0020184 issued by MDEQ. EPA did not tour the wastewater treatment plant during this inspection.

Greenville has experienced several bypasses of treatment and effluent limit violations of the NPDES permit at the Greenville WWTP.

Recommendations: Greenville should develop and implement a Process Controls Plan. In addition, Greenville should consider conducting a Comprehensive Performance Evaluation (CPE) and Composite Correction Program (CCP) as outlined in EPA's Handbook *Improving POTW Performance Using the Composite Correction Program Approach* (EPA-625/6-84-008; October 1984).

VI. ATTACHMENTS

- A. Inspection Photos
- B. Attendance Lists

ATTACHMENT A: Inspection Photos



Figure 1. South Theobald pump station pump house.



Figure 2. South Theobald pump station wet well (note poor condition of influent pipe).

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Figure 3. South Theobald pump station wet well cover (note debris on bottom of cover showing debris from recent SSO).



Figure 4. South Theobald pump station fence (note debris line on fence showing height of wastewater during recent SSO). This area drains to a roadside ditch that enters a canal.

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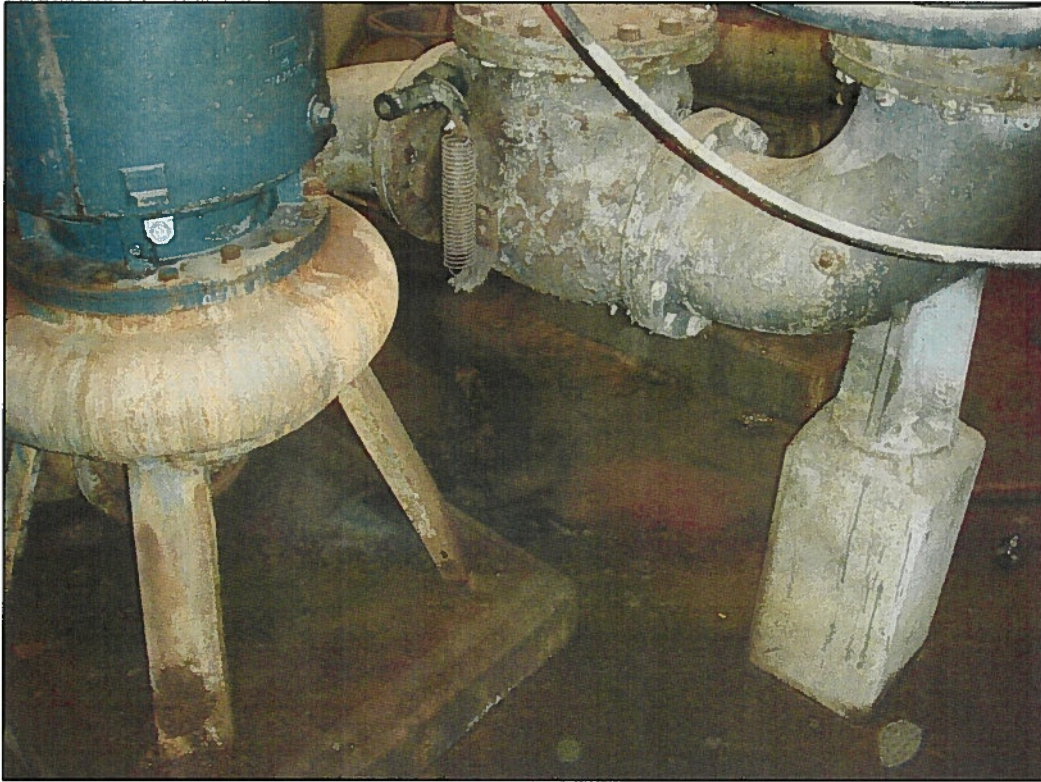


Figure 5. South Theobald pump station dry well (note valve leak on floor causing stain).



Figure 6. Canal crossing (Reed Road south of Hwy. 82). Steel pipe is inside the concrete pipe.

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Figure 7. Anne Stokes pump station wet well (note heavy grease).



Figure 8. Anne Stokes pump station wet well (note dried debris on ladder rung showing surcharge).

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Figure 9. Anne Stokes pump station dry well (note valve leak on one pump).

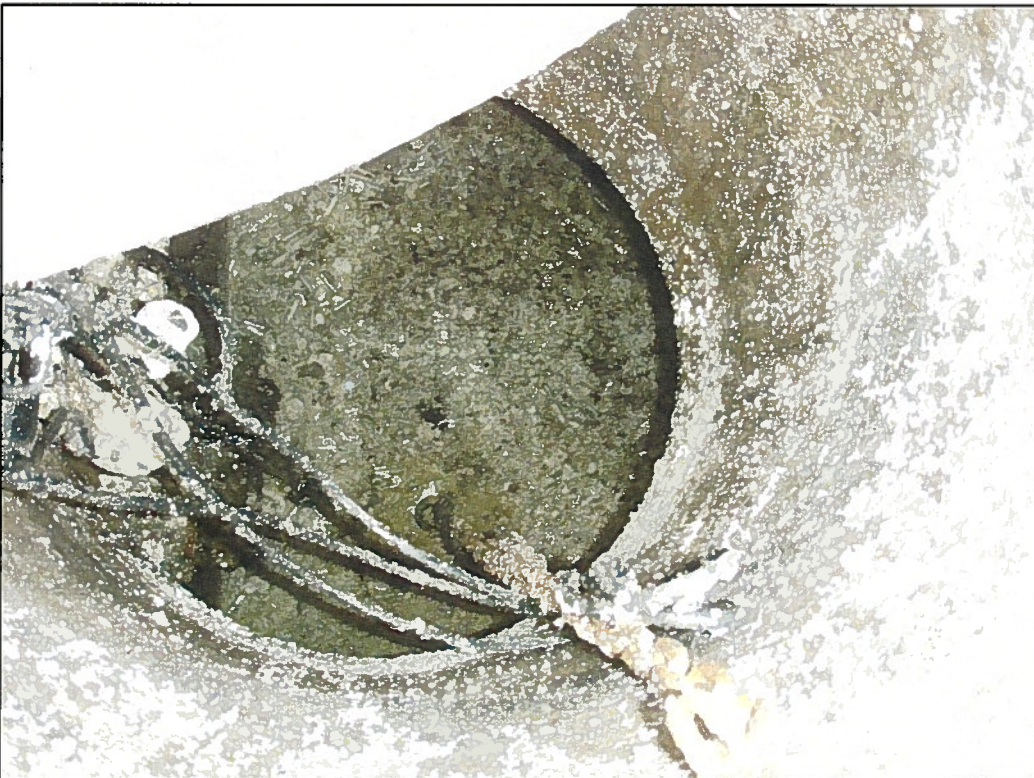


Figure 10. Wildwood #1 pump station wet well (note heavy grease).

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Figure 11. Wildwood #1 pump station (note dried debris at top of wet well and on outside of wet well showing evidence of recent SSO).



Figure 12. Wildwood #1 pump station (wet well on right; dry well on left; note canal in background).

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Figure 13. Wildwood #2 pump station wet well (note heavy grease).



Figure 14. Wildwood #2 pump station wet well (note debris on ladder rungs indicative of surcharge).



Figure 15. Wildwood #2 pump station wet well (note milky white influent from upstream apartment complex, which is indicative of FOG).



Figure 16. Producer's Mill pump station in background (note upstream manhole in wet area).

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Figure 17. Producer's Mill pump station (note bypass hose into force main left connected).

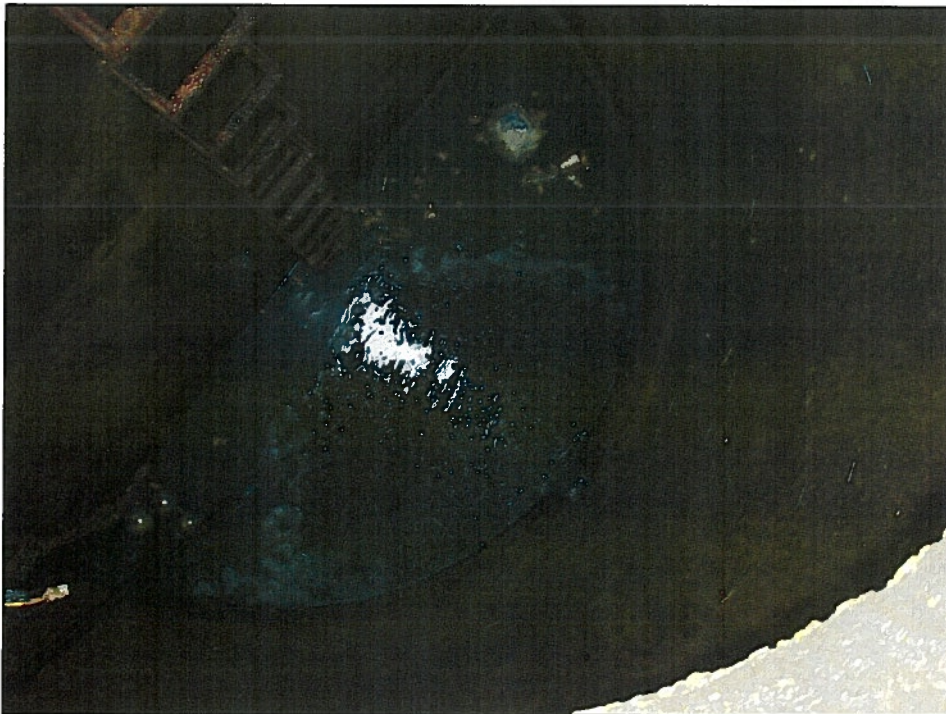


Figure 18. Tennessee Street pump station (note grease, plastics and other debris in wet well).

ENCLOSURE B

RIGHT TO ASSERT BUSINESS CONFIDENTIALITY CLAIMS

(40 C.F.R. Part 2)

Except for effluent data, you may, if you desire, assert a business confidentiality claim as to any or all of the information that EPA is requesting from you. The EPA regulation relating to business confidentiality claims is found at 40 C.F.R. Part 2.

If you assert such a claim for the requested information, EPA will only disclose the information to the extent and under the procedures set out in the cited regulations. If no business confidentiality claim accompanies the information, EPA may make the information available to the public without any further notice to you.

40 C.F.R. §2.203(b). **Method and time of asserting business confidentiality claim.** A business which is submitting information to EPA may assert a business confidentiality claim covering the information by placing on (or attaching to) the information, at the time it is submitted to EPA, a cover sheet, stamped or typed legend, or other suitable form of notice employing language such as "trade secret," "proprietary," or "company confidential." Allegedly confidential portions of otherwise non-confidential documents should be clearly identified by the business, and may be submitted separately to facilitate identification and handling by EPA. If the business desires confidential treatment only until a certain date or until the occurrence of a certain event, the notice should so state.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

**Region 4
Water Protection Division
Clean Water Enforcement Branch**



COMPLIANCE EVALUATION INSPECTION REPORT

City of Greenville, Mississippi
Greenville, Mississippi
NPDES Permit No. MS0020184

Facility Address:
Highland Plantation Road
Greenville, Mississippi 38127

Inspection Date:
January 29, 2013

Inspectors:
Brad Ammons, Environmental Engineer, EPA Region 4
Dennis Sayre, Environmental Engineer, EPA Region 4
Jamon Rucker, Mississippi Department of Environmental Quality

Inspection Report Prepared by:
Brad Ammons
Dennis Sayre

March 19, 2013